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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,881	07/05/2001	Rei Miyamoto	WN-2374	2512

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EXAMINER
FOX, JAMAL A

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/897,881	MIYAMOTO, REI
Office Action Summary	Examiner	Art Unit
	Jamal A Fox	2664

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *05 July 2001*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-16* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *05 July 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some *   c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☒ Certified copies of the priority documents have been received in Application No. 09/897,881.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/23/02 & 7/21/04*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because in Fig. 1, ref. sign 14, "PORTION" is
spelled incorrectly. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are
required in reply to the Office action to avoid abandonment of the application. Any
amended replacement drawing sheet should include all of the figures appearing on the
immediate prior version of the sheet, even if only one figure is being amended. The
figure or figure number of an amended drawing should not be labeled as "amended." If
a drawing figure is to be canceled, the appropriate figure must be removed from the
replacement sheet, and where necessary, the remaining figures must be renumbered
and appropriate changes made to the brief description of the several views of the
drawings for consistency. Additional replacement sheets may be necessary to show the
renumbering of the remaining figures. The replacement sheet(s) should be labeled
"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct
any portion of the drawing figures. If the changes are not accepted by the examiner, the
applicant will be notified and informed of any required corrective action in the next Office
action. The objection to the drawings will not be held in abeyance.

Specification

2.   The abstract of the disclosure is objected to because on line 7 after "header",
"patterns" is spelled incorrectly. Correction is required. See MPEP § 608.01(b).

3.   The disclosure is objected to because of the following informalities: On page 2

line 10 after "a", "frame" is spelled incorrectly. On page 2 line 12 "frame" is spelled

incorrectly.

        Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Zheng et al.

        Referring to claim 1, Zheng et al. discloses a transmission queue managing

system for managing a queue serving packets in a packet switch (switch, col. 8 line 10)

said transmission queue management system (queue manager, col. 14 lines 45-48)

comprising: a differentiating portion (Differential Services, col. 16 lines 6-16) for

differentiating a header (header, col. 16 lines 15-19) information of a received packet,

an adding portion connected to the differentiating portion for adding a discard priority bit

(CLP, col. 14 lines 25-34 and col. 21 lines 34-41), a buffering memory (buffer memory,

col. 26 line 51-col. 27 line 2) connected to the adding portion for memorizing the

received packet to the queue, and a discarding portion (QoS facility 10, col. 15 lines 4-8

and col. 16 lines 20-23) for collectively discarding packets each of which the priority bit

represents high priority from the queue when the number of packets of the queue

coincides with a predetermined threshold (predetermine threshold, col. 15 lines 3-8), but

fails to explicitly teach of producing a differentiated result signal. However,

Differentiated Services is disclosed in col. 14 lines 35-44 and col. 16 lines 6-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to have included producing a differentiated result signal to the

invention of Zheng et al. in order to make sure customer's packets receive a particular

QoS as suggested by Zheng et al.

Referring to claim 9, Zheng et al. discloses a method of managing a queue

serving packets in a packet switch (switch, col. 8 line 10), comprising the steps of:

differentiating (Differential Services, col. 16 lines 6-16) a header (header, col. 16 lines

15-19) information of a received packet, adding a discard priority bit (CLP, col. 14 lines

25-34 and col. 21 lines 34-41) to the received packet, memorizing the received packet

to which the priority bit is added to join the received packet to the queue in a buffer

memory (buffer memory, col. 26 line 51-col. 27 line 2), and collectively discarding

(discard, col. 15 lines 4-8 and col. 16 lines 20-23) packets each of which the priority bit

represents high priority from the queue when the number of packets of the queue

coincides with a predetermined threshold (predetermine threshold, col. 15 lines 3-8), but

fails to explicitly teach of producing a differentiated result signal. However,

Differentiated Services is disclosed in col. 14 lines 35-44 and col. 16 lines 6-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to have included producing a differentiated result signal to the

invention of Zheng et al. in order to make sure customer's packets receive a particular

QoS as suggested by Zheng et al.

6.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Okuda et al.

Referring to claim 1 Okuda et al. discloses a queue managing system (Fig. 9 and

respective portions of the spec.) for managing a queue serving packets in a packet

switch, the queue management system comprising: a differentiating portion (control unit

4, col. 6 lines 18-26) for differentiating a header information of a received packet to

produce a differentiated result (result, col. 2 lines 38-39) signal, an adding portion

connected to the differentiating portion for adding a discard priority bit to the received

packet (CLP bit in a header of each cell, col. 7 lines 15-21) in response to the

differentiated result signal supplied from the differentiating portion, a buffering memory

(buffer control system, col. 1 lines 4-7) connected to the adding portion for memorizing

the received packet to which the priority bit is added to join the received packet to the

queue, and a discarding portion (cell buffer, col. 14 lines 40-43 and col. 18 lines 19-21)

for collectively discarding packets each of which the priority bit represents high priority

form the queue when the number of packets of the queue coincides with a

predetermined threshold (predetermined threshold, col. 14 lines 39-48, col. 18 lines 16-

21, col. 23 lines 45-47 and col. 25 lines 27-36), but fails to explicitly teach of a

transmission queue management system. However, a transmission system is disclosed

in (col. 1 lines 10-15). Therefore it would have been obvious to one having ordinary skill

in the art at the time the invention was made to have included a transmission queue

management system to the invention of Okuda et al. in order to control traffic

congestion efficiently as suggested by Okuda et al.

Referring to claim 2, Okuda et al. discloses a transmission queue managing

system as claimed in Claim 1, wherein the differentiating portion comprises: an

information memorizing portion (storage unit 1, col. 5 lines 57-58) for memorizing at

least one packet header pattern (assigning the values "0" and "1" to the prioritized cell,

col. 7 lines 16-21), and a retrieving portion (tag identification unit 25, col. 8 line 63-col. 9

line 2) connected to the information memorizing portion for deciding whether all or a

predetermined (predetermined, col. 7 lines 32-53) part of the header information of the

received packet is memorized in the information memorizing portion as the packet

header pattern or not to produce the differentiated result signal when all or the

predetermined (predetermined, col. 7 lines 32-53) part of the header information

coincides with the packet header pattern.

Referring to claim 3, Okuda et al. discloses a transmission queue managing

system as claimed in claim 2, the information memorizing portion memorizing two or

more packet header patterns (assigning the values "0" and "1" to the prioritized cell, col.

7 lines 16-21) different from one another and discard priority class information

representative of discard priority classes related with the packet header patterns

respectively, wherein the differentiated result signal includes the priority class

information (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) corresponding to the

header pattern which coincides with all or the predetermined part of the header

information.

Referring to claim 4, Okuda et al. discloses a transmission queue managing system as claimed in claim 3, the buffering memory includes a plurality of queues, the information memorizing portion further memorizing queue ID numbers (Tag=0 and Tag=1, col. 9 lines 31-38) which assigned to the queues respectively and which related with the packet header patterns respectively, the differentiated result signal includes the ID number corresponding to the header pattern with which all or the predetermined part of the header information coincide, wherein: the transmission queue managing system further comprises a queue selecting portion (time slot queue portion, col. 9 lines 31-38) and the buffering memory for selecting one of the queues in response to the ID number included in the differentiated signal.

Referring to claim 5, Okuda et al. discloses a transmission queue managing system as claimed in claim 3, the number of the discard priority classes being equal to three (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) or more, wherein the discarding portion discards (discard, col. 16 line 49 - col. 17 line 34) packets in order of height of the priority classes from the queue.

Referring to claim 6, Okuda et al. discloses a transmission queue managing system as claimed in claim 2, the information memorizing portion memorizing two or more packet header patterns (assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21), discard priority class information (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) representative of discard priority classes connected with the packet header patterns, and counted values (count value, col. 15 lines 52-63, col. 17 lines 46-57 and col. 24 lines 16-20) related with the packet header patterns respectively, wherein the

differentiated result signal includes the priority class information and the counted value

corresponding to the header pattern which coincides with all or the predetermined part

of the header information.

Referring to claim 7, Okuda et al. discloses a transmission queue managing

system as claimed in claim 6, wherein the adding portion adds the discard priority bit to

the received packet on the basis of the priority class information (a "Head", a "Tail", and

a "Mark", col. 9 lines 45-55) and the counted value included in the differentiated result

signal.

Referring to claim 8, Okuda et al. discloses a transmission queue managing

system as claimed in claim 1, wherein the packet header pattern represents a variety

(assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21) of a

connection in which the received packet is transmitted.

Referring to claim 9, Okuda et al. discloses a method of managing a queue

serving packets in a packet switch, comprising the steps of: differentiating a header

(header, col. 2 lines 5-8 and col. 7 lines 15-21) information of a received packet to

produce a differentiated result (result, col. 2 lines 38-39) signal, adding a cell loss

priority bit (CLP bit in a header of each cell, col. 2 lines 5-8 and col. 7 lines 15-21) to the

received packet in response to the differentiated result signal, memorizing (storing, col.

2 lines 18-26) the received packet to which the priority bit is added to join the received

packet (CLP bit in a header of each cell, col. 7 lines 15-21) to the queue in a buffer

memory (buffer control system, col. 1 lines 4-7), and collectively discarding (discarding,

col. 2 lines 22-26) packets each of which the priority bit represents high priority from the

queue when the number of packets of the queue coincides with a predetermined

threshold (predetermined threshold, col. 14 lines 39-48, col. 18 lines 16-21, col. 23 lines

45-47 and col. 25 lines 27-36), but fails to explicitly teach of a discard priority bit.

However, a cell loss priority bit is disclosed in (CLP bit, col. 2 lines 5-8 and col. 7 lines

15-21). Therefore it would have been obvious to one having ordinary skill in the art at

the time the invention was made to have included a discard priority bit to the invention

of Okuda et al. in order to make a distinction between a non-prioritized cell and

prioritized cell as suggested by Okuda et al.

Referring to claim 10, Okuda et al. discloses a method of claim 9, wherein the

differentiating step comprises the steps of: referring an information memorizing portion

(storage unit 1, col. 5 lines 57-58) memorizing at least one packet header pattern

(assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21), and deciding

whether all or a predetermined (predetermined, col. 7 lines 32-53) part of the header

information of the received packet is memorized in the information memorizing portion

as the packet header pattern or not to produce the differentiated result signal when all

or the predetermined (predetermined, col. 7 lines 32-53) part of the header information

coincides with the packet header pattern.

Referring to claim 11, Okuda et al. discloses a method as claimed in claim 10,

the information memorizing portion memorizing two or more packet header patterns

(assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21) different from

one another and discard priority class information representative of discard priority

classes related with the packet header patterns respectively, wherein the differentiated

result signal includes the priority class information (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) corresponding to the header pattern with which all or the predetermined part of the header information coincide.

Referring to claim 12, Okuda et al. discloses a method as claimed in claim 11, the buffering memory includes a plurality of queues, the information memorizing portion further memorizing queue ID numbers (Tag=0 and Tag=1, col. 9 lines 31-38) which assigned to the queues respectively and which related with the packet header patterns respectively, the differentiated result signal includes the ID number corresponding to the header pattern which coincides with all or the predetermined part of the header information, wherein the method further comprises the steps of: selecting one of the queues (time slot queue portion, col. 9 lines 31-38) in response to the ID number included in the differentiated result signal.

Referring to claim 13, Okuda et al. discloses a method as claimed in claim 11, the number of the discard priority classes being equal to three (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) or more, wherein the discarding step comprises the step of discarding (discard, col. 16 line 49 - col. 17 line 34) packets in order of height of the priority classes from the queue.

Referring to claim 14, Okuda et al. discloses a method as claimed in claim 10, the information memorizing portion memorizing two or more packet header patterns (assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21), discard priority class information (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) representative of discard priority classes connected with the packet header patterns,

and counted values (count value, col. 15 lines 52-63, col. 17 lines 46-57 and col. 24 lines 16-20) related with the packet header patterns respectively, wherein the differentiated result signal includes the priority class information and the counted value corresponding to the header pattern with which all or the predetermined part of the header information coincide.

Referring to claim 15, Okuda et al. discloses a method as claimed in claim 14, wherein the adding step comprises the step of adding the discard priority bit to the received packet on the basis of the priority class information (a "Head", a "Tail", and a "Mark", col. 9 lines 45-55) and the counted value included in the differentiated result signal.

Referring to claim 16, Okuda et al. discloses a method as claimed in claim 9, wherein the packet header pattern represents a variety (assigning the values "0" and "1" to the prioritized cell, col. 7 lines 16-21) of a connection in which the received packet is transmitted.

Conclusion

7.   **Any response to this action should be mailed to:**

> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

or faxed to:

> (703) 305-3988, (for formal communications intended for entry)

Or:

> (703) 305-3988 (for informal or draft communications, please label
> "PROPOSED" or "DRAFT")

> Hand-delivered responses should be brought to Crystal Park II, 2121
> Crystal Drive, Arlington, VA. 22202, Sixth Floor (Receptionist).

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jamal A. Fox whose telephone number is (571) 272-

3143. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone

numbers for the organization where this application or proceeding is assigned are (703)

872-9306 for regular communications and (703) 872-9315 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 306-

0377.

Art Unit: 2664

Jamal A. Fox